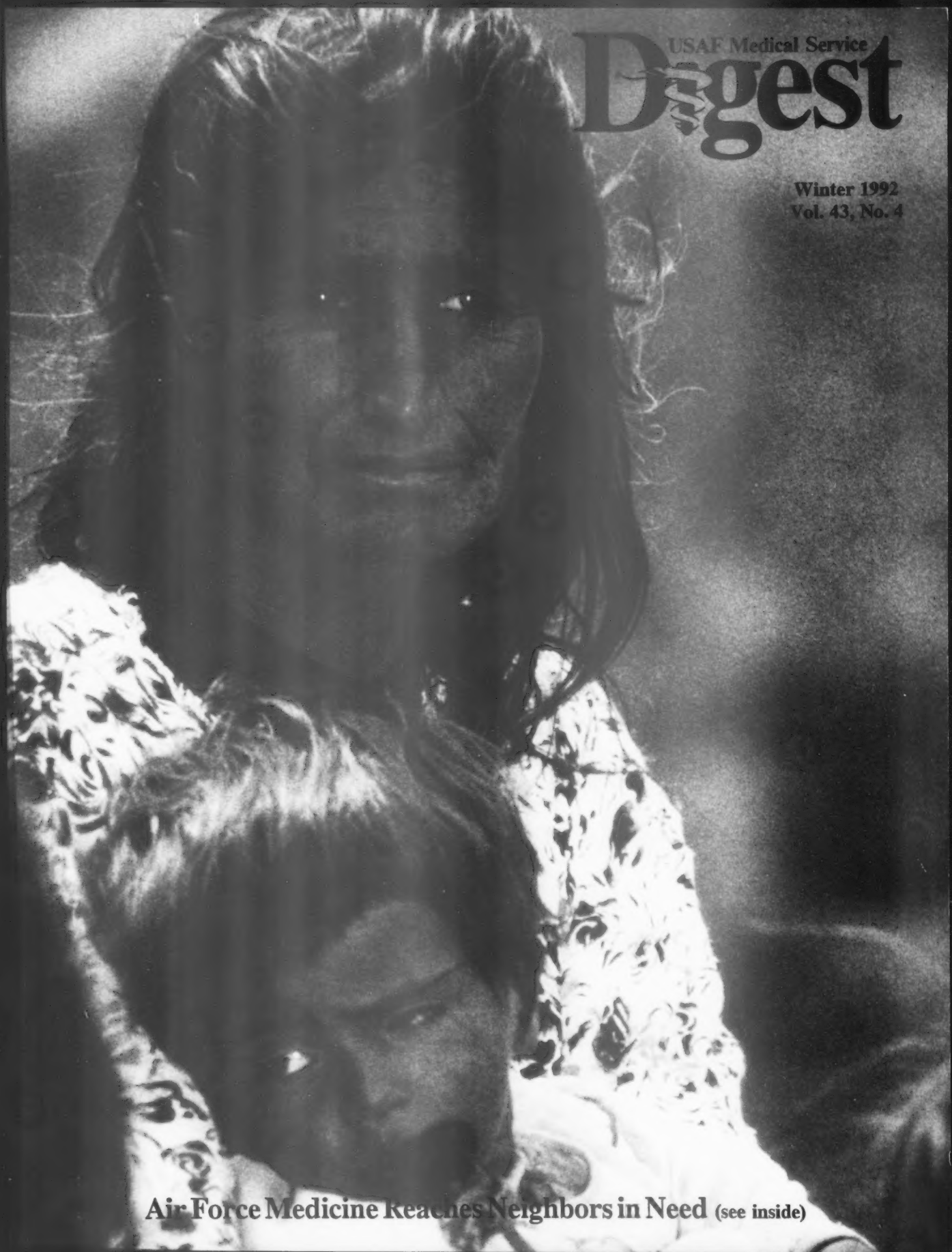

USAF Medical Service

Digest

Winter 1992
Vol. 43, No. 4

Air Force Medicine Reaches Neighbors in Need (see inside)

USAF Medical Service Digest

Winter 1992
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AFRP 160-1

Message from the Surgeon General 3

TQM and Wright-Patterson: A Dynamic Duo 4

Panamanians Get Medical Help 7
Lisa Colgate

Visit Africa with the Air National Guard 9

Medical Support for Kurdish Relief Effort 10
Lt. Col. Linda M. Downing, NC
Maj. Gail McCain, NC

Celebrating 50 Years of Quality Medical Care 12
James S. Nanney, Ph.D.

Wilford Hall Eye Team Travels to Mexico 16
Maj. Price M. Kloess, MC

Preventing Family Violence Through Education 18
Lt. Col. Willard W. Mollerstrom, BSC

View from the Top: Col. Jerry W. Davis 20

Information for Authors 22

Quality Corner 23

Annual Author Index 24

Annual Subject Index 24

From the Editor

The Board and I would like to know what you think of the *Digest*. Do you find it useful, informative, interesting? We value your opinion, and we welcome your comments and suggestions. Please write to:

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Elizabeth Taber

ELIZABETH G. TABER
Editor, *USAF Medical Service Digest*
Office of the Surgeon General

Front cover: A Kurdish mother with her children in a mountain camp.

Message from the Surgeon General

Medical Readiness: Our Global Mission

Medical readiness has always been the number-one priority of the Air Force Medical Service. We agree with 17th century sage Thomas Fuller who said, "In fair weather prepare for foul." Our mission requires the ability to pick up and go at a moment's notice, and we must plan for that on a daily basis.

With our wartime focus shifting from global threat to regional conflicts, the Air Force is preparing for a new kind of foul weather. Responding to crises in regional trouble spots will require global reach and global power of Air Force medicine as well as the line. We must be able to project our medical capability worldwide and be ready to give care in nations with less sophisticated medical support structures.

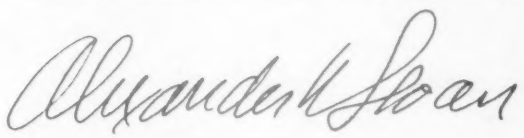
Meeting these changing expectations necessitates strengthening our air transportable hospital (ATH). In addition to chemically hardening the ATH, we plan to add a decontamination team, patient retrieval team and hospital surgical expansion package. Flexibility will also be key to our future role. Medical requirements will differ depending on the nature of the war effort, and we have to be ready for anything — even sustaining medical capability in a third-world environment.

Our humanitarian assistance programs, many involving third-world countries, play an important part in our global reach and power capacity. The Air Force has been on the front line in meeting global responsibilities, and the Medical Service has been right alongside. We have the organization and resources to be there. When hurricane Iniki devastated Hawaii, we provided aeromedical evacuation support and deployed a medical team to the hardest hit island, Kauai. In this issue of the *Digest*, you can read about more of our humanitarian efforts in Panama, Africa and Turkey.

Wherever troops are sent to give assistance, medical support is required, and that support also lends a hand to the suffering community. From October 1991 through August 1992, we were asked to augment a jointly staffed medical capability in Guantanamo Bay, helping Haitian refugees. A number of Air Force physicians, nurses and medical technicians served at various times.

Active duty, Guard and Reserve folks are also increasingly involved in Medical Readiness Training Exercises. These exercises take much-needed, basic medical and dental care to selected sites in countries such as Africa and Honduras, and at the same time, they give us experience in deployment planning and disaster response. Theater commanders-in-chief encourage these nation building exercises because they foster positive relations between our military and third-world countries.

Our new medical readiness posture will include greater involvement in humanitarian relief efforts. We envision them as part of our routine global care mission. I am proud to say that these endeavors to help our neighbors around the world are merely an extension of the compassionate, professional care we give our patients at home.



Alexander M. Sloan
Lieutenant General, USAF, MC
Surgeon General

TQM and Wright-Patterson: A Dynamic Duo

At the USAF Medical Center Wright-Patterson, Wright-Patterson AFB, Ohio, total quality management (TQM) dominates the business of patient care. This customer-focused process improvement strategy enhances the already high-quality provider-directed, outcome-oriented approach to offering health care. Patients and staff members alike are reaping the benefits of Wright-Patterson's dramatic change for the better.

Management Commitment

Wright-Patterson's TQM journey began in 1988 under the leadership of then Col. Charles H. Roadman II. A seven-year $123 million renovation seriously disrupted access to the medical center, and according to the inspector general's office, the place needed help desperately. The organization of the medical center caused even greater problems. Like most military medical facilities, the center was organized by rather isolated departments (1). As Roadman began learning about TQM, he recognized that this would have to change.

Roadman's guidance and enthusiasm sparked initiation of several TQM activities. For example, a Quality Council formed to oversee long range, quality operations and planning at the medical center. The group, comprised of senior military staff members and enlisted and civilian advisors, became responsible for launching and coordinating all quality initiatives at Wright-Patterson. To do this, the senior leadership had to gain understanding of TQM — of its philosophy, its methods and its benefits — and begin to cascade information throughout the medical center.

Well-organized process action teams at Wright-Patterson bring knowledgeable people together in a structured way to work efficiently on process improvement.

As a result of management involvement, a key structural change took place at the medical center in 1989 with the introduction of matrix management. Matrix management recognizes that patients must cross many departments and boundaries of the organization to obtain medical care (2).

Established in each clinical service, matrix teams — comprised of a physician, administrator, senior nurse and senior enlisted supervisor — provide cross-disciplinary management of patient services. This breaks down barriers of individual departmental "stovepipes." The obstetrics and gynecology (OB-GYN) matrix team is particularly successful. The team eases a patient's passage through the typical OB-GYN course, from pregnancy testing to lab and imaging services, from prenatal clinic care to inpatient care, from newborn care to postpartum follow-up (1).

Matrix teams marked the beginning of a new culture, a culture of collaboration among departments. Col. John C. Anderson, commander of the medical center since May 1990, continues to accelerate and solidify collaboration. He also emphasizes the importance of staff training to transform the medical center into a total quality organization. Since its inception, the Quality Council's function has become instituting TQM throughout the medical center.

Quality Improvement

The Quality Council laid the foundation for continuous quality improvement by developing mission and vision statements for the medical center, by establishing a definition of quality and by defining five organizational values. They also began establishing long-term (strategic) and short-term (operational) goals for Wright-Patterson. Since the medical center plans in the long-term to move from simply treating patient conditions to preventing illness, its short-term goals focus on identifying customer needs and wants and on improving the system to meet them (2).

The various departments at Wright-Patterson use a unique, 11-step Departmental Task Analysis (DTA) model to define their particular mission and vision in relation to those of the medical center. The DTA is patterned after an eight-step model developed by Boeing. Conducting a DTA helps departments systematically identify key customers, key suppliers and their needs. Departments also identify their own daily work processes and note which customers are most involved in each. Use of DTA is aimed at more targeted departmental planning.

Wright-Patterson also uses a nine-step improvement methodology, called FOCUS-PDCA and developed by the Hospital Corporation of America, that can be linked to the scientific method of research. It uses data to understand, study and monitor process improvement needs and decision making. The acronym refers to the following nine steps:

F ind a process to improve;
O rganize a team that knows the process;
C larify current knowledge of the process;
U nderstand sources of process variation;
S elect process improvement;
P lan the improvement and continued data collection;
D o the improvement, collect and analyze the data;
C heck and study results of the improvement;
A ct to hold the gain and continue to improve the process (2).

The teams mentioned in the second step above, organized of people who work with the process under consideration, are called process action teams (PATs). Members can be from one department or different departments, depending on whom the process touches. Information is collected and analyzed at the level where the process occurs and involves people who will benefit from process improvement.

For example, Wright-Patterson's same-day surgery clinic experienced a crisis. Cancellations occurred regularly, and surgeons were frustrated because it was more and more difficult to schedule patients. Patients, upset by long waits and multiple trips to the facility, complained to executive management. A PAT comprised of an anesthesiologist, a surgeon, a technician and nurses who work with the clinic, was chartered to suggest improvements.

The PAT began to study and flowchart the same-day surgery process; the flowchart helped team members graphically portray their routine for in-depth study. The team identified and eliminated some 39 unnecessary, or non-value added steps, and they standardized forms in the request process. By making several improvements, such as creating a video education program to eliminate extra trips to the center, the team realized outstanding results. Cancellations due to incomplete paperwork dropped from 8 percent to zero, surgeon satisfaction improved and access increased from five patients a day to 20 (2).

Another successful PAT focused on Wright-Patterson's inpatient medication management. The pharmacy had a recurring problem with missing medicine and incorrect distribution of medications and dosages to inpatient ward areas. As many as 95 medication discrepancies might occur in one week. Nurses recognized discrepancies when they received the medication cart at the nursing station before treating the patients. They had to correct the problems then, resulting in work duplication, wasted medication and great frustration.

Sgt. Rodney McCubbins receives pharmacy orders from nursing units via facsimile machine — no more carbon copies.

A PAT formed to analyze and recommend improvements to the order and delivery process. The first breakthrough came when the pharmacy discovered that the key customer of the process was not the patient as they had believed, but the nurse on the unit. Using statistical analysis and flowcharts, PAT members found the root cause of discrepancies was the use of regulation Air Force forms.

Regulation forms provided the pharmacy a carbon copy of prescription orders. Because carbons were heat sensitive and not always aligned with the original form, orders were often illegible. Using facsimile machines to send legible copies of the orders to the pharmacy eliminated 30 percent of the steps in the original process. This led to a 67 percent decrease in discrepancies by the end of the first week of testing and a nearly 100 percent reduction by the end of week two. The current average for the entire medical center is 1.7 discrepancies per unit weekly (2).

Customer-Focused Approach

Because TQM emphasizes the importance of customer feedback in planning for process improvement, Wright-Patterson seeks feedback from patients in a variety of formats. The staff distributes written patient surveys in the clinics, executes special telephone surveys, conducts "on-the-street" surveys at the commissary or base exchange and tracks patient compli-

Ms. Cindy Huffman (left), patient relations coordinator for the medical center, hands out an "on the street" health care survey at the base exchange.

ments and complaints. These findings help identify process improvement opportunities.

For example, Wright-Patterson used feedback to plan process improvement in their emergency department. In 1989, the emergency department saw an average of 92 patients each day, with up to 14 who left without being seen. Extensive process analysis and customer feedback revealed that most patients arrived at the emergency room between 3:00 and 8:00 p.m. when access to other clinics was most limited. To improve access, Wright-Patterson initiated an acute care clinic, staggered hours of some clinics and increased emergency room staffing at peak hours. An average of 110 patients are now seen daily, and only one or two patients leave without being seen. Also, the department now calls those who leave to find out why they left and to schedule them for care.

Another example of using customer feedback for process improvement took place in Wright-Patterson's outpatient pharmacy where long lines could cause a 50 minute wait. A PAT found that much waiting was caused by the physical layout of the pharmacy with its collocated refill desk. After streamlining the layout of the pharmacy and moving refill services to a separate area, waiting time was cut 70 percent to a current average of 13 minutes (2).

Conclusion

The stimulating TQM culture at the USAF Medical Center Wright-Patterson encourages staff members to find creative ways to improve their health care service processes. Everyone, not just top level managers, takes part in this continuous, proactive effort to meet customer needs, setting TQM apart from common management. TQM's emphasis on collecting "just the facts" and on using logical, analytical evaluation results in sound, objective solutions — solutions that go beyond the sometimes surface "fixes" of other management strategies. Although Wright-Patterson still has room for improvement, its initial successes provide a model for other medical facilities taking the first steps toward TQM.

This article was compiled by Elizabeth G. Taber, Digest *editor, with contributions from Capt. Mark A. Vojtecky, assistant director of TQM operations, USAF Medical Center Wright-Patterson, Wright-Patterson AFB, Ohio; Maj. Sandra K. Murray, director of TQM at the same facility; and CMSgt. Kenneth H. Vandegrift, assistant director of TQM, also at Wright-Patterson.*

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Six Steps to Lead TQM at Your Facility

1. **Understand TQM.** Knowing TQM means being committed to continuous learning, and it requires an investment of your personal time, energy and attention.

2. **Send a consistent message.** From the start, clearly convey, in word and action, that you support and expect from others behavior that demonstrates the tenets of TQM.

3. **Make it easy for *everyone* to participate.** Show that TQM is important for everyone by providing the same level of training for all and by holding training and process action team meetings *during* duty time.

4. **Install a support system.** Make it clear that you are changing an organizational culture by providing the resources — training, rewards, automation — to sustain and nurture TQM throughout the facility.

5. **Set up a reward system.** Put top priority on the way you recognize and reward TQM efforts; make all your existing performance review processes and award programs emphasize TQM initiatives.

6. **Lead by example.** This is the power *behind* the power of TQM. State what you expect, but also tell your staff what they may expect of you — then follow through.

These guidelines were provided by two Air Force pioneers in TQM: Brig. Gen. (Dr.) Charles H. Roadman II, command surgeon, U.S. Transportation Command and Lt. Col. Charles W. Boone, Ph.D., executive assistant, office of the assistant secretary of defense (health affairs).

Panamanians Get Medical Help

Specialists from Hill AFB take free medical, dental care to three remote villages in Panama

(Editor's note: This article is reprinted with permission from the Hilltop Times, *Hill AFB, Utah.)*

Lisa Colgate

As part of a nine-day Medical Readiness and Training Exercise (MEDRETE), medics from the USAF Hospital Hill, Hill AFB, Utah, provided free medical and dental treatment to inhabitants of three remote Panamanian villages. Beginning on Feb. 17, the MEDRETE, a joint military operation designed to foster cooperation with the Panamanian government and people, provided Hill medics with extensive field medical training.

Pediatrician Maj. (Dr.) Steve Princiotta (right), assisted by Sgt. Carlos Parra (left), receives valuable cross-training in field dentistry when demand for dental care exceeds the supply of dentists in Panama.

A Great Mission

Hill medics, along with 18 U.S. Army members and 22 Panamanians from the Ministry of Health, provided immunizations, outpatient primary care, dental care, veterinary and pharmacy services, preventive medicine and health education. The group faced primitive travel conditions; there were no roads or airstrips. Access to the villages of Sabanita Verde, Boca de Guasimo and Santa Rosa was limited to canoe, horseback or helicopter.

The villages had no electricity other than that provided by the team's generators. Running water was limited to one or two water spigots per village, and the majority of homes had dirt floors. The villagers opened their homes to the traveling medics, but because the team sought the most sterile environment, they chose to set up their clinics in buildings with concrete floors. Churches and a schoolhouse were used by the team as sleeping quarters and treatment centers.

This is the first time medical experts have represented Hill in this kind of exercise. Team members representing Hill included a family practice physician, a pediatrician, a dentist, three support technicians, a medical administration officer and a combat cameraman.

Lt. Col. Steve A. Oliver, chief of family practice at the hospital, has an interest in public health and in treating people who lack access to health care. "I expected to see many more serious illnesses, such as birth defects, untreated chronic illnesses and inadequate nutrition," Oliver said. "We saw very few of these types of illnesses; however, we encountered a lot of infectious illnesses, such as skin infections and intestinal parasites."

The most unusual ailment Oliver and his coworkers encountered was cutaneous leishmaniasis, which is caused by a small parasite. According to Panamanian doctors, the parasite is transmitted by mosquitoes and causes large open sores that form on the skin surface. Left untreated, the lesions eventually erode down to the muscles and can be seriously disfiguring.

"We treated leishmaniasis patients by injecting medication directly into skin lesions," Oliver said. "A large number of patients also harbored intestinal worms, so we routinely treated children ages one through 12 with a dose of liquid parasite medication. Adults who complained they had worms received pills. We found it impossible to keep up with the demand for parasite medication and eventually ran out."

Oliver said that less than 1 percent of the Panamanians he treated showed symptoms of illnesses commonly treated in the United States. "I saw no chronic lung disease, emphysema or cancer, and was surprised to see very few cases of high blood pressure and only two stroke victims," he said. "I attribute

these findings to the Panamanians' healthy diet and low-stress life-style. They eat vegetables, rice, some meat and consume little or no alcohol."

The medics performed minor surgery, such as removing fatty tumors. Patients requiring follow-up treatment or treatment that doctors were unable to provide were issued referrals entitling them to free medical care at a Panamanian hospital. The nearest hospital was three hours away. In six days of active patient care, the diverse 48-member team treated 2,598 medical patients, 1,838 dental patients and 677 veterinarian patients.

Health Education and Personal Hygiene

The medics provided health education for adults and children. Children were shown a Walt Disney video on how to avoid infectious disease by practicing good personal hygiene. Capt. David H. Pfotenhauer, a general dentist at Hill, performed procedures such as tooth extractions and fillings. "I brought my camera expecting to see interesting growths and cancers of the mouth," Pfotenhauer said. "The Panamanians don't fluoridate their water so I was not surprised when I found extensive tooth decay. I thought it unusual, too, that no one needed braces."

Working with small school desks as dental chairs, Pfotenhauer extracted some 1,000 teeth. Pfotenhauer used a tongue depressor and a penlight to locate problem teeth and would ask the patients if they wanted the tooth removed. "I mostly treated decayed teeth which had receded under the gum line. The people were stoic in accepting dental treatment, which was surprising," he said.

Pfotenhauer said that at first he felt frustrated because he could not speak Spanish. He was unable to tell patients when to spit or ask them if their mouths were numb. "My staff and I did not speak Spanish, and we didn't have an interpreter. Through necessity, I managed to learn enough words to ask my patients where it hurt. The only problem was they would sometimes respond in a full-blown conversation. I had no idea what they were saying," he said.

Pfotenhauer used the Spanish word *dormida*, meaning asleep, and *gorda*, meaning fat, to determine whether or not a patient could feel the numbing effect of local anesthetic. "I thought I had crossed the language barrier by asking patients if their mouths felt asleep and fat, until one of my female patients gave me a disapproving, offended look. Apparently, she thought I was asking her if she was lazy and fat," he said. "She laughed when she understood what I was trying to say, though."

Pfotenhauer said that the experience left him with a greater understanding of the world around him and more appreciation of a different culture. "I glanced into a hut on our way home, and suddenly realized that I had more in the duffel bag I was carrying on my back than this entire family had in the way of possessions," he said. "It's funny, even though these people had very little, they had everything they needed. They seemed more content than many Americans because they weren't 'wanting.'"

Valuable Experience

Capt. Dan Morgan, director of medical logistics at the hospital, said that he participated in the exercise because he believes in the mission's objectives. "I worked with the joint services on these exercises while I was stationed at Howard AFB, Panama. I am a firm believer in the value of these missions and have found them to be very rewarding, both professionally and personally," Morgan said. "I would say these exercises have been the best experiences of my military career."

Oliver said that the benefits of the exercise were far superior to those from training exercises he had completed in the past. "I came across a 70-year-old woman who was bedridden with a year-old broken hip. The hip was never treated, and because she was unable to walk, her legs had stiffened and atrophied quite severely," Oliver said. "It was unbelievable that this woman had been confined to a stiff board bed, yet had no bed sores."

Oliver said that the woman's family had taken care of her 24 hours a day, moving her frequently and tending to her physical as well as emotional needs. He feels that American families have come to rely on others to provide care for the elderly and that this Panamanian example proves that there is more to treating illness than medicine alone.

Dr. Princiotta treats a young Panamanian, one of 2,598 medical patients in six days.

***NOTE:** Theater component surgeon planners manage and source unit participation in MEDRETEs to meet theater commander-in-chief requirements. For more information, contact your MAJCOM.*

At the time this article was written, Lisa Colgate was a staff writer for the Hilltop Times, *Hill AFB, Utah.*

Visit Africa

Lt. Col. Anne Flickinger (forefront right) gives medicine to one of the many patients seen.

2nd Lt. Julie Lucken (left) and SMSgt. Sally Nagel (right) assist with delivering a baby.

***Above:** A local boy receives care in Kedougou.*

In November 1991, members of the 126th USAF Clinic, an Air National Guard (ANG) unit from Chicago, Ill., headed for Senegal, Africa, to provide humanitarian assistance. During their 14-day stay, they treated more than 2,600 Senegalese people. Applying their medical skills to delivering babies, treating exotic diseases and teaching preventive medicine techniques, gave ANG members immeasurable training. They learned to respond to the challenges of a new and ever-changing environment. The lessons that they gleaned will help them in their continuing service to their fellow Americans.

***Below:** Large numbers of local people come seeking medical help.*

126th USAF Clinic environmentalists evaluate potable water.

with the Air National Guard

Medical Support for Kurdish Relief Effort

Lt. Col. Linda M. Downing, NC
Maj. Gail McCain, NC

On April 26, 1991, members of the 48th Tactical Fighter Wing Hospital at RAF Lakenheath, England, deployed to Silopi, Turkey, in support of Operation Provide Comfort, a Kurdish relief effort. After many months of being on alert for situations ranging from earthquakes in Armenia and civil unrest in Liberia to Operation Desert Shield/Storm in the Persian Gulf, we were finally on our way. Even though at the time we were not sure where we were going, how long we would be away from home or what our mission would entail, we were excited — and a little frightened.

Getting Settled

We boarded a plane at RAF Mildenhall, England, and eventually, after a 12-hour layover in Torrejon AB, Spain, we arrived at Incirlik AB, Turkey. Twenty-four hours later, we were in a Turkish bus on the way to our final destination. After a 10-hour ride from Incirlik over mountains and narrow, winding roads at breakneck speed, we arrived at the Humanitarian Services Support Base, Silopi. Located in the old Mesopotamia plain, two miles from Iraq, Silopi is in a beautiful valley surrounded by snow-capped mountain ranges.

The Army base where we set up our air transportable hospital (ATH) was located in a giant wheat field, and our first impression was definitely disbelief. Old medium-sized General Purpose tents provided living accommodations, Meals, Ready to Eat were stocked on hundreds of pallets, trucks filled with supplies lined both sides of the highway and the Turkish community, realizing that Americans were on the scene, had established booths for selling their local wares.

We devoted the first few days to becoming acquainted with medical professionals joining us from other USAFE facilities. We also set up the hospital and inventoried our supplies and equipment. Even though the ATH was damaged en route, we erected three hardwall shelters, called ISO shelters, to house the operating room, radiology and laboratory. Temper tents provided inpatient care areas, administration, pharmacy, emergency room, central sterile supply and dental services. Also included in our compound were outlying tents for military public health, nutritional medicine, medical logistics, mental health and biomedical equipment repair.

Treating the Kurds

At Silopi, our basic mission was two-fold: We would man the ATH, giving medical and surgical support to 18,000 U.S. and Allied military troops in the area, and we would make trips into Iraq to assist with screening and treating Kurdish refugees. Many of our members had the opportunity to work with medical groups from other countries, making prolonged trips into the mountains or staffing a hospital in Zakho, Iraq, 10 miles from Silopi. These trips gave us an understanding of the hardships the Kurds faced and a recognition of their medical care needs.

The Kurdish refugee camps were great learning experiences. As far as the eye could see, white tents occupied designated relocation sites, and thousands of people awaited medical care. The Kurds amazed us with their ability to smile, going about their daily

activities as if nothing had happened to uproot their lives and send them away from their homes. In spite of crowds at the camps and major delays, the screening process flowed rather smoothly, and Kurds received much-needed medical attention. Teams gave measles, mumps and rubella vaccinations to many children and treated a host of adult diseases and injuries, including old gunshot wounds and combat injuries, scorpion stings, burns, typhus, cholera and malnutrition. The teams also collected statistical data on nutritional status and infant mortality while in mountain camps.

Refugees who required more intensive care or surgery were sent to the Zakho hospital. Seeing heavily armed Marines patrolling the roof of a medical facility was a new experience for us, and surprises did not stop after we went inside. The Iraqis took everything with them when they moved out and left patients without supplies and equipment to care for themselves or rely on family members. Crowded into bays, with many lying on the floor, patients suffered from septic shock, amputations, multiple shrapnel wounds and burns.

Working at the ATH

While some people made trips into Iraq, the first casualties began arriving at the ATH, testing our trauma management capabilities. Our first patient had a gunshot wound to the left of his breastbone. In spite of all we could do, he died. Certainly a discouraging way to open for business. As the days moved on, patients continued to arrive. We received land mine casualties, fuel explosion victims and victims of rocket-powered grenade blasts. The majority required surgical intervention, keeping our two general surgeons and one orthopedist quite busy. Needless to say, our small ATH often resembled a major trauma center.

Opposite page: Children were among the many patients treated at a Kurdish refugee camp in Zakho, Iraq. Above: Surgeons perform a craniotomy in the ISO shelter.

We were amazed by how quickly we adapted to working in our new environment. Sparse conditions brought out our creativity. For example, when we discovered that bolts for stabilizing the operating room lights were missing, brackets from wooden nesting boxes were hung from the ceiling. This provided adequate lighting for the surgeons, but it kept a busy staff even busier moving the lights to new positions. Since we had no pneumatic or field tourniquets, we used blood pressure cuffs for orthopedic procedures. This challenging environment taught us to remain flexible, and we discovered that we could function well in new and unfamiliar roles.

Along with the trauma cases, we treated patients with malaria, cholera, typhus and "sandfly fever." Caring for these patients taxed our limited resources, and, at one point, we had to set up an additional tent to help manage an increase in gastroenteritis cases. Our people worked diligently keeping patients hydrated, cooled and as comfortable as possible; however, dust, intense heat, bugs, spiders and lack of adequate toilet facilities made this an almost impossible task.

We experienced periods of boredom as well, and in a way, these were more difficult than times of frenzied activity. During slow times, our minds were too easily occupied with concerns about home and family, rumors regarding the length of our deployment and feelings of isolation. To help cope with these feelings of helplessness, activities away from the ATH became very important. Cookouts, volleyball, trips to other medical facilities and shopping excursions to the Turkish base exchange all contributed to high morale and promoted esprit de corps.

Conclusion

Although Operation Provide Comfort is now one year in the past, it seems as though it were only yesterday. The faces, especially of the children; the experiences, including a burn patient's walking into the ATH with arms widespread saying, "Somebody please help me — I'm on fire"; and the challenges, too numerous to count, are still vivid memories. Each of us came away changed to some degree. Although we are happy to be home, forgetting Silopi will be impossible.

Lt. Col. Linda M. Downing is now the surgical suite supervisor at David Grant USAF Medical Center, Travis AFB, Calif., and Maj. Gail McCain is the health promotion coordinator at the USAF Clinic Andersen, Andersen AFB, Guam.

Celebrating 50 Yea

James S. Nanney, Ph.D.

This year Wilford Hall Medical Center celebrated its golden anniversary. Located on the northern edge of Lackland AFB, nine miles west of San Antonio, Texas, this famous institution overlooks Lackland Training Center, the "Gateway to the Air Force" for thousands of officer and enlisted trainees since 1942. Ten stories high, with many adjacent and outlying buildings, the center is not only physically imposing, it is the Air Force's largest medical center in patient workload, physician specialties, postgraduate training and clinical research. The center achieved its current preeminence throughout several decades by responding to growth of the military population in and around San Antonio. This growth justified the expansion of a small World War II base hospital into one of the Air Force's premier medical institutions.

On March 2, 1962, the USAF Hospital Lackland was renamed Wilford Hall USAF Hospital in honor of dedicated physician and distinguished Air Force officer, **Maj. Gen. (Dr.) Wilford F. Hall** (1904-1962). During World War II, Hall, working as a colonel in the air surgeon's office, helped shape the first American system for evacuating wartime patients by air transport. As command surgeon of the Military Air Transport Service from 1948 to 1954, Hall oversaw the establishment of the Air Force's peacetime aeromedical system and the design of its first dedicated medical aircraft, the Corvair C-131A. Aeromedical transportation eventually made possible the structured referral system of the USAF Hospital System and the designation, in July 1969, of five USAF Medical Centers, including Wilford Hall USAF Medical Center. From 1954 to August 1957, Hall was chief medical officer of the Supreme Headquarters of the Allied Powers in Europe, located in Paris, France. He capped his career by serving as chief surgeon of Air Materiel Command at Wright-Patterson AFB, Ohio, retiring on Oct. 1, 1959.

The Facility

The land around today's Wilford Hall served as a bivouac area and bombing range for Kelly Field until the eve of World War II. In June 1941, major new construction began on Kelly's western side beyond Leon Creek, known as "the Hill." Included was a hospital complex housed in 130 temporary wooden cantonment buildings (groups of buildings connected only by covered walkways).

In July 1942, this station hospital of the San Antonio Cadet Center began to receive patients. The hospital had 1,200 beds by the end of the war in September 1945. The hospital's patient workload remained high after the war mainly because Army Air Forces established their central military training center at Kelly Field in February 1946. In July 1947, the western side of Kelly Field, including the hospital grounds, became part of the newly-designated Lackland AFB, assigned to the Air Training Command.

Because of a shortage of physicians, the hospital had just downsized to an infirmary in June 1950 when American entry into the Korean War suddenly gave it new life. Within six months, the hospital expanded to almost 1,000 beds, treating thousands of recruits while serving as a major debarkation point for casualties returning from Korea. At the Lackland hospital, most casualties received supportive care before moving on to definitive care at other facilities.

By the end of the Korean War, the Lackland hospital was well on its way to becoming a major Air Force medical center. The hospital obtained accreditation as a major teaching facility and as a specialty treatment center, providing complete medical and dental care to military members and their families assigned to approximately 15 Air Force installations in the Southwest. Since many of the hospital's World War

ears of Quality Medical Care

II buildings badly needed repair, the Air Force obtained congressional approval for construction of a permanent nine-story, two-wing hospital with 500 beds, located just north of the old cantonment buildings.

Ground was broken for the new building on Oct. 11, 1954, and the Air Force surgeon general, Maj. Gen. (Dr.) Dan C. Ogle, dedicated the new USAF Hospital Lackland on Nov. 16, 1957. Explaining his decision to establish such a facility at Lackland AFB, Ogle noted San Antonio's recent growth as a center for clinical and military medical education. Although the city did not yet have a civilian medical school, Ogle expected it to acquire one soon. His goal was to see the new Lackland hospital serve as the center of Air Force medical education and research. After the dedication, the hospital's major medical functions immediately moved into the new building, although several specialties and clinics continued to work in the older structures.

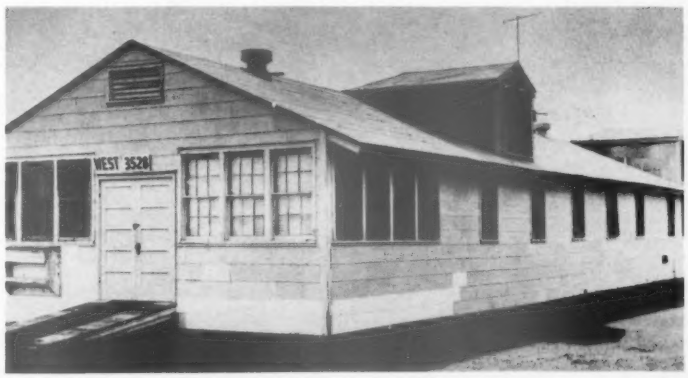
Growth in the patient population soon required further improvements. In March 1961, a third wing with another 500 beds was dedicated, making the hospital the largest one-unit hospital in the Department of Defense (DOD). In October 1962, a clinical research laboratory was created to coordinate the growing number of research projects. A dental clinic, adjacent to the hospital, was added to the complex in June 1965. Although patient load continued to climb during the Vietnam War, the hospital had no major facility additions.

From 1976 to 1983, however, in a massive expansion project at the medical center, a new three-story wing for clinics, a new one-story north wing, a nine-story bed tower, a total energy plant and a separate new dental clinic were built, tripling the size of the complex to 1.3 million square feet. All outpatient facilities were consolidated in the new Clinic Annex, and the World War II and Korean War buildings were abandoned. In December 1984, the clinical research laboratory was moved into a large modern building next to the main hospital. A field training site, called Camp Rissington, was added in April 1985, and a high-capacity waste incinerator in 1991.

The Staff

As the building expanded and changed over the years, so did the staff at Wilford Hall. They are now most notably characterized by a high-level of competency in the full spectrum of modern medical care, including some of the most innovative technologies and treatments. Wilford Hall's tradition of institutional excellence can be traced to the mid-50s, when the hospital began to assume responsibility as a teaching and research institution and as the major Air Force referral center in the Southwest. Development of the Air Force peacetime aeromedical system in the mid-50s permitted centralization of highly specialized physicians at Lackland's large, well-supported medical facility, where the growing size of the local patient population already justified an advanced facility.

At the same time, new teaching and research responsibilities made the hospital doubly attractive to Air Force physicians. By 1960, Lackland had established residencies in anesthesiology, general surgery, internal medicine, obstetrics and gynecology, orthopedic surgery, pathology, pediatrics, radiology and



The original hospital at Kelly Field, now Lackland AFB, Texas, consisted of temporary wooden cantonment buildings constructed for World War II.

On Nov. 17, 1985, this infant was the first to be sustained in-flight on the extracorporeal membrane oxygenation device.

urology. A substantial fellowship program was also soon inaugurated.

As the staff became highly specialized in the late 1950s, they began to contribute to preparing the first Americans for space flight. On Oct. 1, 1959, the hospital was combined with other units and the School of Aviation Medicine at Brooks AFB, Texas — located 15 miles east in southern San Antonio — to form the USAF Aerospace Medical Center. In May 1961, responding to a request from the National Aeronautics and Space Administration (NASA), the hospital provided a clinical support team for the launching and recovery of astronaut Alan B. Shephard's first American suborbital space flight.

The hospital then formed a special unit at Cape Kennedy AFS, Fla., to support the entire series of Project Mercury space flights. The hospital itself provided medical examinations and treatment to all astronauts assigned to the new Manned Spacecraft Center of NASA in Houston. This growing research mission resulted in the hospital's transfer to the new aerospace medical division of Air Force Systems Command, on Nov. 7, 1961.

In the 1960s, the staff expanded its expertise to many other areas. For example, in 1962 the open heart surgery program began, making Wilford Hall the only Air Force cardiac surgical center. In 1965, the hospital opened the USAF Central Eye Bank, which supplied military and civilian hospitals with fresh or preserved eye tissue. In the mid-60s, Lt. Col. (Dr.) Kenneth H. Cooper, director of clinical investigations, conducted pioneer studies of aerobic functions that eventually led to major changes in armed forces physical conditioning and testing programs. The staff at the Wilford Hall clinical research laboratory began to earn an excellent national reputation for their research on humans and animals.

In December 1967, Ogle's vision for Wilford Hall was fully realized. Wilford Hall and the newly-dedicated University of Texas Medical School at San Antonio agreed to exchange medical staff and students for mutually beneficial projects. The University of Texas Dental Branch at Houston also affiliated itself with Wilford Hall for teaching purposes. By the late 1980s, Wilford Hall provided more than 60 percent of postgraduate training for Air Force physicians, and these graduates consistently out-performed their civilian peers on national examinations.

After the major facility expansion of the late 1970s, Wilford Hall's staff members became national leaders in several other important areas. For instance, in the field of newborn infant care, Wilford Hall became the first DOD hospital to offer a lung bypass procedure know as extracorporeal membrane oxygenation (ECMO). The staff developed a portable version of the ECMO system that permits in-transit respiratory support for critically ill infants. In 1983, the hospital also became the single Air Force referral center for AIDS patients, and the National Institutes of Health later designated Wilford Hall and the nearby Southwest Foundation for Biomedical Research as a national center for AIDS research.

In the mid-80s, the hospital expanded its transplant programs. For example, in December 1982, the center offered autologous bone marrow transplants (when patients are their own donors), which are especially valuable in treating breast and brain cancers. In October 1986, Wilford Hall became the only DOD hospital offering allogeneic bone marrow transplants (when the donor is a genetically matched sibling) for leukemia patients. In the last few years, Wilford Hall acquired the latest diagnostic scanning technologies, such as magnetic resonance imaging, computed tomography (CAT) scanning and positron emission tomography (PET) scanning.

Starting in 1982, the Wilford Hall staff expanded its mission by adding readiness. In event of war, the center was now expected to rapidly deploy many military staff overseas, leaving Wilford Hall's patients in the hands of its new Reserve unit, the 11th USAF Contingency Hospital. On April 12, 1985, the hospital dedicated a new nine-acre field training site, known as Camp Rissington, where the hospital staff and reserve medics would be trained in field medicine and aeromedical evacuation procedures.*

In February 1987, Wilford Hall was assigned to the Joint Military Medical Command, which was disbanded Oct. 1, 1991. The hospital then reverted to Air

* During the Persian Gulf War in January and February 1991, about 900 staff members were sent to RAF Little Rissington, England, where they set up a prepositioned, 1,500-bed contingency hospital.

Training Command, where it serves today. Although Wilford Hall does not have a current aerospace development mission, its traditional role as the leading institution in Air Force patient care has not changed.

The Patients

Wilford Hall's highly trained staff have always focused on their patients, who have increased in both number and variety during the past four decades. In the early 1960s, the hospital recorded about 575,000 visits a year; in 1990, the center recorded almost 1 million visits. In the 1940s and 1950s, most of the patients were active duty Air Force members; today, these customers make up only one fifth of the workload.

Many patients today are from other services — the Army, Navy, Marine Corps and other uniformed services such as the Coast Guard — and a few are visiting military members from other countries. For instance, the number of U.S. Army and Navy patients of all types, including active duty, retirees and all families, has increased 20 times since 1964. Today, non-Air Force military patients make up 10 percent of Wilford Hall's workload.

In 1956, federal legislation opened the military medical system to dependents and survivors of active duty members and to retirees and their family members. Visits to Wilford Hall by the new retiree beneficiaries continued to increase dramatically, especially after the Vietnam War. In the early 1960s, such beneficiaries were only about 5 percent of the workload; in the late 1980s, they made up more than one-third of Wilford Hall's patient visits. But family members of all types were the main beneficiaries of the 1955 legislation. Since the early 1960s, families of active duty and retired service members have been the largest patient category, about 45 percent of the center's workload.

Staff members carry a loaded litter through an obstacle course at Camp Rissington, the medical center's field training site built in April 1985.

Doctors examined 48,367 pediatric outpatients at Wilford Hall Medical Center in fiscal 1992.

Most of Wilford Hall's patients live in the San Antonio area, but some drive to the hospital from other areas of the Southwest. Also, several thousand inpatients and outpatients, referred by doctors on other bases, arrive each year through the aeromedical system. Many of these patients are seeking medical care that is not available elsewhere in the Air Force or the other services. In the 1950s and early 1960s, Wilford Hall received almost 30 percent of its inpatients by transfer from facilities outside the Southwest. In July 1969, the creation of a regionalized USAF Hospital System with five designated referral centers, including Wilford Hall, significantly reduced this transfer workload. But Wilford Hall, with its size and several unique specialties, still receives some of the most complex medical cases in the Air Force.

Conclusion

The end of the Cold War may eventually reduce the number of patients coming to Wilford Hall because of the resulting drawdown in the size of the U.S. armed forces. But for the next few years, even with fewer active duty members stationed in the area, military retirees and their families will continue to justify the hospital's size. The center will also continue to play a key role in contingencies by deploying its staff and receiving casualties. Whatever workload or mission the future brings, Wilford Hall Medical Center can draw inspiration from its tradition of excellence in medical education, research and patient care.

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Wilford Hall Eye Team Travels to Mexico

Maj. Price M. Kloess, MC

At the beginning of this year, a 10-member team from the ophthalmology department at Wilford Hall Medical Center, Lackland AFB, Texas, departed from San Antonio en route to Tamaulipas, Mexico. At our own expense and on leave status, we were on our way to participate in an eye surgery missionary enterprise. The project was performed in conjunction with Medical Group Missions (MGM) headquartered in Richardson, Texas, that sponsors many eye mission trips around the world each year.

Getting Started

For most of us, this was our first experience with third-world medical work. We learned right away about the incredible amount of planning that was needed. Once the list of participants and dates for the project was decided, we immediately began procuring equipment and supplies. Although the trip was sponsored by MGM, all equipment and supplies were provided by individual participants.

The medical director, Air Force Reserve Lt. Col. Robert Rice, had been on several trips before and was invaluable in helping us obtain what we needed. We held many "packing parties" where we gathered, packaged, sterilized and stored the supplies for a single eye surgery. We made about 150 of these sterile packs for anticipated surgeries. Other equipment obtained for the project included intraocular lenses, operating instruments, pre- and postoperative medications and operating microscopes.

Maj. (Dr.) Price M. Kloess (middle), chief of cornea/external disease at Wilford Hall, performs eye surgery in Victoria City, Mexico.

Finally, the day of departure arrived. The team met at San Antonio International Airport, boxes and suitcases in hand. After several bon voyage group pictures, we kissed our families goodbye, not knowing for certain what the future held in store for us. Our flight to Harlingen, Texas, was a short one. We were met at the airport by members of DIF, a department of the Mexican government that deals with missionary medical work, and a bus.

The bus trip was unforgettable — and long. We traversed the Mexican-American border with no difficulty and traveled south for some time. After about eight hours, we stopped for a late lunch at a roadside restaurant. The DIF officials planned this well, and we found the food and hospitality warm and enjoyable. We boarded the bus again, and after another four hours, finally reached our destination, Victoria City, well into the night. Victoria City is a modern metropolis, and our accommodations were similar to a Holiday Inn, only cozier with four adults per room. Despite the tiring, extremely long bus trip, our spirits were good and enthusiasm ran high.

When we assembled in the cafeteria for breakfast the following morning, we realized that we made up only a small part of a team of 75 people who had gathered from throughout North America to join the effort. A large contingency from Canada had worked together on several trips in the past and knew each other well. We all introduced ourselves and told of the experiences that led us to participate in this project. The majority of the team were lay people without previous medical experience who would be invaluable to the success of the trip.

We began work immediately after breakfast. Our primary facility was a large, freestanding medical clinic modestly equipped and adjacent to a hospital where we would perform all operations. We spent the morning stocking the clinic with supplies and installing equipment. MGM keeps an incredibly large inventory of labeled eye glasses, and literally tens of thousands of glasses were available.

The same afternoon that we finished stocking the clinic, we saw more than 600 patients. The efficiency of the system was unbelievable. Patient flow was carefully monitored throughout the clinic and eight stations we had set up. The stations ranged from initial identification of each patient and visual acuity screening to more thorough medical evaluations when indicated and final treatment, whether enrollment for surgery or medication or eye glasses. During one afternoon, more than 60 people were designated for surgery the following morning. The need for surgery was so great relative to our resources, that the criterion for cataract surgery was < 20/200 vision, or legal blindness, in both eyes.

Lt. Col. (Dr.) Stephen Waller (left), an ophthalmology resident at Wilford Hall, receives heartfelt thanks from Mexican patients during postoperative rounds.

Personal Impressions

The trip contained a myriad of life-changing experiences. I, for one, will never forget the second day. I had been detained by a meeting after breakfast and was a few minutes late to the clinic. Incredibly, at this early hour of the day, 1,000 patients were waiting to be seen. As I walked through the tent to the clinic entrance, the patients stood and applauded. Startled, I looked around to see for whom they were clapping. They were clapping for me! This was a most humbling experience, and one that I will long remember.

One of our residents related a story of how he had finished in the operating room early and decided to help at the eye glass dispensing station. His first patient was an elderly woman who had extremely poor vision. Within seconds of putting on the glasses, she smiled, leaped to her feet and said, "I can't repay you for these glasses, but God can!" The story had a profound impact on all of us.

I spent most of my week in the operating room suite and was truly amazed with the portable, state-of-the-art equipment available for our surgeries. The quality of cataract surgery with intraocular lens implantation was comparable to the quality of surgery in America. Teenage translators accompanied the patients and proved invaluable during the week. These young people were eager to watch us operate and to learn about ophthalmic procedures. We could perform six operations simultaneously by using a converted storage room adjacent to the hospital and another room. We also had general anesthesia capability.

The remarkable, cooperative spirit during the project created a unique environment where friends were easily made and an incredibly large volume of work was accomplished. Over the course of six days, we saw 4,000 patients. More than one half of these patients were given eye glasses. We performed 294 major operations, 49 minor operations, fitted four artificial eyes and measured 300 people for intraocular lenses.

Perhaps the most gratifying part of the trip occurred during the postoperative rounds held each morning. Because we surgeons performed a large volume of cases daily, we each had to come up with a way of identifying our own patients. We quickly adopted the idea of placing the surgeon's initials on the eye patch used to cover operated eyes. With the help of our teenage translators, we grouped postoperative patients according to the initials each morning. Then we removed the patches and performed our examinations. The looks on the faces of those who had been totally blind for many, many years was indescribable. The tears, joy and laughter were contagious, and at the end of postoperative rounds, the entire group of patients would stand and sing for the surgeons. Then the patients would file by to thank their surgical staff and receive postoperative medications. Emotions ran high during this ritual that we grew to cherish as the most memorable part of the trip.

Conclusion

Before we knew it, it was time to go home. After postoperative rounds and breakfast on Saturday morning, we were packed and ready to go. The long bus ride back to the States gave us all time to reflect on what a truly wonderful experience this had been. The training alone was invaluable because of its direct application to Air Force contingency medical training. We learned many practical lessons, and perhaps most importantly, we gained a more global view of health care. In particular, we recognized the great need for medical and surgical eye treatment that exists in the world. The trip was so successful that we made it part of our residency training curriculum and will be planning another similar one for early next year.

Maj. Price M. Kloess is the chief of cornea/external disease at Wilford Hall Medical Center, Lackland AFB, Texas.

Preventing Family Violence Through Education

Air Force Family Advocacy Evaluates Parent Training Program

Lt. Col. Willard W. Mollerstrom, BSC

Air Force family advocacy recently joined forces with Father Flanagan's Boys Home, a national organization headquartered in Boys Town, Neb., to test and further develop a parent training program. They are evaluating the effectiveness of a parent training program currently established at three bases to determine whether the program should be expanded throughout the Air Force. The parent training program, based on educational materials from the Boys Home residential program, works with families who have not experienced an episode of abuse or domestic violence and aims at influencing parent/child interactions before they become destructive.

Participating in the Training Program

Family advocacy interest in the parent training program reflects the changing emphasis in Air Force medicine from treatment toward prevention. According to the *Journal of Consulting and Clinical Psychology,* parent training effectively prevents physical child abuse and neglect within families (1). Although parent training programs operate from various theoretical perspectives, behavioral parent training remains one of the more well-developed, well-researched ways to influence parent/child interactions. It particularly helps prevent child maltreatment (2, 3).

In the program under evaluation, eight weeks of skills training are offered, covering topics such as setting up children for success, dealing with intense situations, responding to problem behaviors and improving behavior through negotiation. Each of the weekly two-hour teaching sessions includes small group role plays, individual time with the parent trainer, weekly assignments and reassessment of family goals.

Family advocacy staff conducting the course receive a standardized Training for Trainers workshop. The workshop includes five days and three evenings of training at Father Flanagan's Boys Home in Nebraska, training manuals and teaching materials for conducting the classes. Parent trainers also receive weekly audio/video tape review and consultation after each of the eight sessions.

Parent trainers are available to discuss issues, such as problem behaviors and corrective teaching, with parents in the training program.

Responding to Problem Behaviors

Parent training focuses on reducing children's behavioral problems and on improving parent's attitudes and problem-solving skills. Parents learn exactly what behavior is all about and will be taught how to respond to their children's problem behaviors by using techniques such as effective praise and corrective teaching. While learning to use effective praise, for example, parents are encouraged to positively reinforce good behavior by prais-

ing children, for instance, when they call home to let the family know where they are and when they will be back, or when they put their bike away properly without being asked. The key steps parents should take are: describe the positive behavior, give a reason and get a response.

Corrective teaching responds to problem behavior and teaches an alternative behavior. In the training, parents learn to recognize and stop problem behavior and present their children with a consequence for the behavior. Then parents teach an alternative behavior and practice it with the children. For example, to teach children self-control, parents help them identify the problem when it appears and give clear instructions, allowing time for them to calm down. Then parents provide follow-up teaching.

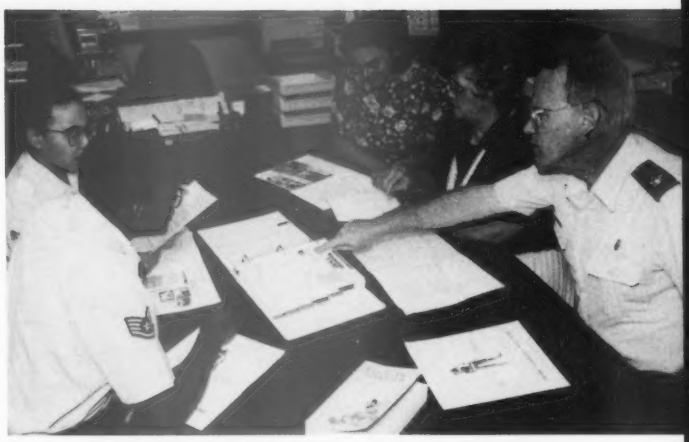
Parents also learn that they need to remain calm in the heat of conflict and keep control by staying aware of their own physical actions. They learn to stick with the original issue and take all the time they need to resolve the problem. Corrective teaching breaks the argument cycle and teaches children by example that they have other choices for resolving problems. This process also gives children the message that they are responsible for their actions and can control how they respond to their own thoughts and feelings.

When parents recognize and reward positive behaviors and respond constructively to misbehavior, children will be less likely to rely on antisocial behavior. Decreasing the number of aversive interactions between parents and children increases the chance that they will spend quality time together, further improving the parent/child relationship.

Helping Children Solve Problems

The parent training program specifically focuses on communication and problem solving. In particular, the program teaches the Situation, Options, Disadvantages, Advantages, Solution and Follow-up (SODAS-F) method of teaching children how to solve problems (4). Parents use SODAS-F to help children specifically identify a problem and outline different options, good and bad, for handling it. Together, they list why each option may or may not work well. Parents offer encouragement but should let children select an option and give their reason for the selection. Then parents check to see whether the option worked.

The SODAS-F method helps children solve problems and make decisions, and it gives parents and children a chance to share viewpoints in a non-threatening way. It also gives support to the parents who, after all, have the greatest impact on their children's lives. Building relationships takes time, and the parent/child relationship is no exception. In training, parents are taught to expect a little resistance and testing of the system, and they are cautioned to be patient, not expecting a complete turnaround in a few months.



Family advocacy staff examine materials from Boys Town that will be used in the Air Force parent training program.

Conclusion

Family advocacy anticipates that the training program will significantly improve parents' skills, helping them become more positive and less critical of their children's behaviors and helping them feel more competent and self-confident. If it proves effective, the parent training program will be a great step in the right direction toward preventing problems that lead to family violence.

Lt. Col. Willard W. Mollerstrom is the director of family advocacy research, headquarters, Air Force Medical Operations Agency, Brooks AFB, Texas.

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The *Digest* Interviews

Col. Jerry W. Davis

On Oct. 16, 1992, the *Digest* interviewed Col. Jerry W. Davis, director of the Biomedical Sciences Corps since December 1991. In his interview, Davis addresses the impact of coming changes, such as manpower and funding reductions and managed care, on the Corps. He also outlines the growth of the Corps since its inception and reports on feedback from a recent job satisfaction survey.

Digest: What is the greatest challenge facing the Air Force Biomedical Sciences Corps (BSC) today?

Colonel Davis: I see the greatest challenge facing the BSC to be the same one facing the entire Air Force Medical Service, and that is maintaining mission effectiveness in an environment calling for manpower and funding reductions.

Our officers on the clinical side of the Corps are very much involved in providing direct medical care while balancing cost, quality and access, as is the rest of the Medical Service. Keeping up with escalating occupational, environmental and safety compliance requirements, including those in the flight environment, challenges our environmental scientists. Personally, as director of the Corps, my greatest challenge is maintaining adequate numbers of well-qualified people in each of our Corps specialties. That requires success at recruiting, education and retention.

Digest: What are some other key issues that you plan to focus on as director of the BSC?

Colonel Davis: The officers of the BSC are our most valuable asset — they are the Corps. A recent survey of the entire Corps revealed that the vast majority of officers are satisfied with their jobs, the assignment process, training opportunities and Air Force life in general. In fact, compared to survey results of other Air Force people, BSC officers are evidently very content overall. They did voice some concerns, however, with civilian pay parity, promotion opportunity and just plain recognition for the jobs they are doing for the Air Force.

I am interested in seeing improvements in all of these areas and plan to focus on them at every opportunity. Recognition costs nothing. An occasional "Good going!" or pat on the back from the commander is what they are talking about. We can work on this with success, I am sure. Pay and promotions are a different story, especially at a time when the budget deficit seems to dictate our every move. I want all BSC members to know, however, that we discuss these issues frequently in this office, and we will continue to give them a lot of attention. Past disappointments will not stop future attempts. In fact, they make us smarter for future attempts.

Digest: How will managed care impact the BSC specialties?

Colonel Davis: Managed care's objective is to provide high quality medical care to the greatest number of beneficiaries at the lowest possible cost. As I mentioned before, balancing cost, quality and access presents a big challenge that all Medical Service members are committed to meeting. Managed care will especially impact those BSC officers who deliver or directly support hands-on patient care: optometrists, clinical psychologists, clinical social workers, physi-

cian assistants, podiatrists, occupational therapists, physical therapists, audiologists, speech pathologists, laboratory officers, dietitians and pharmacists.

BSC officers provide one third of all outpatient care in the Medical Service. Also, nearly 70 percent of all medical supply money, more than $270 million annually, is used in our pharmacies and clinical laboratories. Our BSC officers are continually searching for ways to improve these services and make them more efficient. Additionally, our BSC environmental scientists (public health officers, bioenvironmental engineers, medical entomologists, aerospace physiologists and health physicists) play important roles in the preventive health care arena, which is an integral part of managed care. Our BSC officers in research, information systems, health facilities and command positions directly and indirectly impact Air Force-wide implementation of managed care. Last, but not least, those in medical readiness, medical intelligence and other arenas all play an important part in the Medical Service mission by helping work toward improved overall efficiency.

Digest: What is the status of recruiting and retention in the BSC?

Colonel Davis: The answer depends on the specialty to which you are referring. Some of the BSC's 17 specialties and more than 30 subspecialties are more readily available from the civilian sector than others. Also, some specialties tend to remain on active duty longer than others.

For example, we find it extremely difficult to recruit physical therapists and physician assistants. The civilian market offers salaries for these specialties that exceed Air Force entry-level pay. Dietitians and optometrists have extremely low retention rates for varying reasons. One of our biggest retention problems is with senior bioenvironmental engineers. They are not difficult to recruit, but after several years of experience working on environmental issues in the Air Force, they are lured back into the civilian sector.

We are continually looking for solutions to the problems of specialties that are difficult to recruit or retain. We have reopened the training program for physician assistants, started Health Professions Scholarship programs for optometrists and clinical psychologists, and we have affiliated with the Army and Baylor University to train physical therapists.

Special pays and retention bonuses will continue to be pursued, but as I said earlier, budget concerns are impeding progress at this time. Once we know the extent of base closures and what our manpower strength and requirements for each specialty are going to be, we can begin working on these pay incentives again. Promotion opportunity is receiving a lot of attention, and we will continue to work very hard on behalf of all grades in the BSC. These are just a few

of our initiatives to improve recruiting and retention. Certainly, accessing and retaining quality people has been, and will always be, one of our top priorities.

Digest: How has the BSC changed over the past 10 or 20 years?

Colonel Davis: Someone once said that the only constant is change, and that has certainly been the case in the BSC. The Corps began in 1965 with eight specialties and fewer than 900 officers. Today, we are 17 specialties strong with nearly 2,700 officers. Some important changes include commissioning physician assistants into the BSC in 1978, and development of the Military Public Health career field after disestablishment of the Air Force Veterinary Corps in 1980. Also significant was the transfer of environmental health nurses into the BSC in 1988 from the Nurse Corps and the recent addition of the toxicology and cardiovascular perfusion subspecialties. No changes are pending at this time, but history tells us to "stay tuned," especially in the current dynamic military environment.

Digest: Do you have a personal message for members of the BSC?

Colonel Davis: I am extremely proud of the entire Corps, including the nearly 7,000 enlisted members who keep us going. We could not do our jobs without them. At a recent BSC workshop, the surgeon general presented a list of chief-of-staff special-interest items: situational awareness, health promotion, centrifuge training, nutrition, disease prevention and fitness. I proudly pointed out that both environmental and clinical BSC members are directly involved in and responsible, to a large extent, for many aspects of these programs.

As far as the Air Force vision is concerned, the men and women of the BSC are helping "build the world's most respected air and space force" as an integral part of the best and most comprehensive health care system in the world — the Air Force Medical Service.

Digest: Thank you, Colonel Davis.

Information for Authors

The *USAF Medical Service Digest* focuses on the people, programs and activities of the Air Force Medical Service. All members of the Medical Service are encouraged to submit interesting, informative articles that appeal to a broad spectrum of medical officers, enlisted members and civilian employees.

Tips for Publication

Articles are selected for publication after review and approval by the editor and *USAF Medical Service Digest* editorial advisory board. Board members are listed on page two of all *Digest* issues and are available, along with the editor, to discuss story ideas at any time.

Some patterns have emerged from recent decisions of the editor and board:

Focus on Air Force people, programs and activities. Articles that paraphrase a regulation, summarize a directive, restate a policy letter or delineate the steps in a process (you should do this, you must do that) are almost always rejected. On the other hand, articles that illustrate how medical people have accomplished a mission, successfully applied a process, met a challenge or responded to a crisis are always in demand. "Good news" stories are welcome.

Strive for broad readership. The Medical Service is made up of many educated, energetic, intelligent people, and the *Digest* needs to reach them all. Avoid writing articles that only your professional peers would understand. It is possible to make an otherwise narrowly focused topic interesting and applicable to a broad audience by carefully choosing a story angle and tone.

Use simple English and appropriate style. Overuse of acronyms, technical jargon and report-style words has doomed many articles to rejection. A good rule of thumb is to strive for content a high school student could understand. Write in conversational style. Active voice is always better than passive, and strong active verbs outshine weak "being" verbs.

Submit photographs. A picture is indeed "worth a thousand words." Use pictures of people in action to grab your readers' attention and emphasize your topic. Good pictures or line art, vs. diagrams, graphs and statistical charts, draw readers into a story.

Timeliness counts. Except for historical features, the editor and editorial advisory board always select topics of current interest over ones that are stale. Keep in mind that the *Digest's* lead time (the time after an article is received and before it can be seen in print, i.e., the time necessary for the publication process) is approximately three months. Plan your articles to keep them timely.

Avoid duplication. A quick review of recent *Digest* issues can help in this regard. Unless you have a totally new slant, topics published within the past year are poor candidates for publication.

Be factual. The author is responsible for ensuring that all material is complete, accurate and current. Articles with more opinion than fact (editorials) are almost always rejected.

Prepare for some editing. Almost all submissions are edited before publication. Some changes are made to keep within the *Digest's* space limitations while others are made simply to improve the final product. Accept editorial suggestions and changes positively.

Enjoy the writing experience. Having an article published in the *Digest* represents a significant professional and personal accomplishment. An enthusiastic, positive approach helps everyone, from the editor to the reader.

Format for submissions

In the interest of consistency, submission of articles for publication should meet the following specifications:

- Submit a typed original and one copy of double-spaced, 10-pitch (pica) text, with one-inch margin on all sides or a similarly formatted WordPerfect file on a 3.5 inch disk.
- Number each page except the first.
- Use subheadings whenever possible to organize the article and aid reader understanding.
- Number references consecutively as they are first mentioned in the text. Identify references in the text, tables and legends by Arabic numerals (in parentheses).
- For photographs, black and white glossies, either 5 inches by 7 inches or 8 inches by 10 inches work best. Please identify all people in pictures and write a brief explanation of each picture. Send original, camera-ready illustrations, diagrams and drawings because copies do not always reproduce well.
- Include name, rank, address, DSN number and duty title of all authors. If there is more than one author, please indicate whether one is the primary author .

References

Use the style of the examples below. The examples are based on formats used by the U.S. National Library of Medicine in *Index Medicus.*

Journals

1. Standard Journal Article (List all authors when six or less; when seven or more, use only the first three and add et al.)
   You CH, Lee KY, Chey RY, Menguy R. Electrogastrographic study of patients with unexplained nausea, bloating and vomiting. Gastroenterology 1980; 79:311-4.
2. Corporate Author
   The Royal Marsden Hospital Bone Marrow Transplantation Team. Failure of synergenic bone marrow graft without preconditioning in post-hepatitis marrow aplasia. Lancet 1977; 2:242-4.
3. No Author Given
   Anonymous. Coffee drinking and cancer of the pancreas [Editorial]. Br Med J 1981;283:628.

Books

4. Personal Author(s)
   Robinson DH. The dangerous sky: a history of aviation medicine. Seattle: University of Washington Press, 1973:126.
5. Editor, Compiler, Chairman as Author
   Daussett J, Colombani J, eds. Histocompatibility testing 1972. Copenhagen: Munksgaard, 1973:12-8.

Other Articles

6. Newspaper Article
   Murphy C. 26 days in Kuwait: chaos, fear and tears. Washington Post Aug 29, 1990 A1 (col1).
7. Magazine Article
   Budish AD. Avoiding the Medicaid trap: How to protect yourself from the staggering costs of nursing home care. The Retired Officer Magazine 1990 Sep, Vol XLVI, No 9:37-39.

Clearance Procedure

All articles require clearance through the following official channels before they can be published: supervisor, facility/unit commander, base public affairs office, MAJCOM public affairs office and MAJCOM surgeon. Mail the **fully cleared article** to:

Editor, *USAF Medical Service Digest*
HQ USAF/SGI, Bldg. 5681
Bolling AFB, DC 20332-6188

Additional information is available in AFR 190-1, Ch. 11, "Security and Policy Review."

Other Questions?

The *Digest* editor and members of the editorial advisory board can help you with story ideas. In addition, the editor will be glad to answer any questions relating to policies and procedures of the *Digest.* Please feel free to contact them at any time.

Quality Corner

Your facility's name here — Radiology team performed a comprehensive study of the hospital's X-ray system. They revolutionized the process from start to finish, cutting turnaround time for transcription of radiology reports from an average of 11 days to two.

The *Digest* is a great place to advertise your total quality management, or Quality Air Force, success stories. When one of the process action teams at your facility significantly improves a process, send us a summary of the good news. Keep your items short (about 50 words), and we will do our best to print them as they come in.

Let's encourage each other as we implement Quality Air Force principles at medical treatment facilities Air Force-wide. To find out more about total quality management, read Wright-Patterson's success story on page four of this issue.

Send all entries to HQ USAF/SGI, Bldg. 5681, Bolling AFB, DC 20332-6188, ATTN: *Digest* editor.

Annual Author Index: Volume 43, 1992

Armstrong, Robert C., Col., MSC (Fall:4)
Boone, Charles W., Lt. Col., MSC (Winter:6)
Cardona, Valerie A., Maj., NC (Spring:14)
Colgate, Lisa (Winter:7)
Dols, Michael A., SSgt. (Summer:23)
Downing, Linda M., Lt. Col., NC (Winter:10)
Hart, Kenneth R., Col., MC (Summer:4)
Hopper, Michael L., Maj. (Summer:6)
Horrisberger, Troy S., Capt., MSC (Fall:24)
Jenks, Cynthia T. (Spring:11)
Kloess, Price M., Maj., MC (Winter:16)
Mauk, Bryant D., Col., MC (Summer:4)
McCain, Gail, Maj., NC (Winter:10)
McDavid, Stephen T., Maj., MC (Spring:7)
Mollerstrom, Willard W., Lt. Col., BSC (Winter:18)
Nanney, James S., Ph.D. (Winter:12)
Nice, Paul W., Lt. Col., MSC (Summer:14)
Pank, James W., Capt., BSC (Fall:9)
Peters, Fred W., Capt., MSC (Spring:4)
Peters, Susan E., Maj., NC (Spring:4)
Rigdon, David T., Col., MC (Fall:17)
Roadman, Charles H. II, Brig. Gen., MC (Winter:6)
Schroeder, Richard E., Lt. Col., MSC (Summer:19)
Seaman, Deborah A., Capt., MSC (Summer:11)
Turner, Patti S. (Fall:7)
Watson, George M. Jr., Ph.D. (Fall:11)
Wildman, Ronald E., Lt. Col., MSC (Spring:7)
Wilson, John G., Col., MSC (Summer:15)

Annual Subject Index: Volume 43, 1992

Access to care (Spring:5; Summer:24; Fall:4, 15; Winter:5, 6, 15)
Aeromedical evacuation (Spring:9; Fall:12; Winter:3, 12, 14-15)
Aerospace medicine (Spring:19; Summer:4; Winter:14)
Air Force bases featured:
- Altus AFB, Okla. (Spring:7)
- Bolling AFB, D.C. (Summer:6)
- Brooks AFB, Texas (Summer:4)
- Eglin AFB, Fla. (Spring:4, 14)
- Hill AFB, Utah (Winter:7)
- Keesler AFB, Mo. (Fall:17)
- Lackland AFB, Texas (Spring:11; Winter:12, 16)
- Langley AFB, Va. (Summer:11)
- Los Angeles AFB, Calif. (Fall:4)
- Luke AFB, Ariz. (Summer:15)
- Patrick AFB, Fla. (Summer:24)
- Wright-Patterson AFB, Ohio (Winter:4)

Air Force fellowship (Summer:14)
Air National Guard (Winter:9)
Automation (Spring:3, 4; Summer:8, 9)
Awards/promotions/certifications (Spring:22-24; Fall:20-24)
Bicycle ergometry (Fall:9)
Biomedical Sciences Corps (Winter:18, 20)
Bone marrow transplantation (Spring:11; Winter:14)
Career field review (Fall:3)
CHAMPUS (Spring:14; Summer:15, 18, 19)
CHAMPUS reform initiative (Summer:16; Fall 5)
Composite health care system (Spring:3, 4; Summer:8)
Contract negotiation (Summer:19)
Dental Service (Fall:6, 15)
Desert Storm (Spring:19; Summer:12; Fall:14, 16, 24; Winter:10)
Discharge planning (Spring:14)
Family Advocacy (Spring:22; Winter:18)
Genetics (Fall:17)
Hall, Maj. Gen. (Dr.) Wilford F. (Winter:12)
Health care finder (Summer:15, 18)
Health promotion (Spring:22; Fall:9, 15)
History (Summer:4, 22; Fall:11; Winter:12)
Humanitarian efforts (Winter:3, 7, 9, 10, 16)
Information for authors (Winter:22)
Legislative affairs (Fall:7)
Coordinated care (Spring:19, 20; Summer:3, 8, 14, 15, 18; Winter:20)
Medical readiness (Spring:19; Fall:16; Winter:3, 7, 9, 10)
Medical Service Corps (Summer:8)
Nurse Corps (Spring:14; Winter:10)
Obituary
- Mrs. Patti S. Turner (Fall:9)

Partnership program (Summer:16, 19)
Patient sensitivity (Spring:14; Summer:23)
Preventive health care (Spring:22; Winter:18, 21)
Recruiting/retention (Summer:9; Fall:16; Winter:21)
Reorganization/drawdown/consolidation (Spring:21; Summer:5, 6, 7, 10, 19; Fall:3; Winter:20)
Reserve mobilization issues (Spring:20)
Total quality (Spring:21; Summer:9, 13; Fall:3, 14; Winter:4, 23)